What is Claimed is:

1. A green switch power supply with standby function, comprising:

a standby power supply having a standby converter circuit, a standby feedback circuit, a standby feedback circuit, a standby control circuit;

a main power supply having a main converter circuit, a main feedback circuit, a main control circuit, wherein the standby control circuit, a DC input terminal of said standby power supply, said main control circuit, and a DC input terminal of the main power supply being with a common ground;

a monolithic green switch power supply IC integrating at least said standby control circuit, said main control circuit, and a supplemental circuit, said IC is enabled by a unique power-on initiating circuit and is electrically supplied by said standby power supply;

or a monolithic green switch power supply thick film circuit comprising said standby control circuit, said main control circuit, said thick film circuit is enabled by a unique power-on initiating circuit and is electrically supplied by said standby power supply;

or a monolithic green switch power supply modular circuit comprising said standby feedback circuit, said standby control circuit, said main control circuit, said modular circuit is enabled by a unique power-on initiating circuit and is electrically supplied by said standby power supply;

wherein said main feedback circuit comprises a main sample circuit, a main error amplifier, a main isolation circuit, a remote control circuit, said main control circuit comprises a main pulse adjustable circuit, a main driven circuit, and a main power supply prohibitive circuit;

an isolated remote control signal being send to said main control circuit for controlling said main power supply on/off, wherein said sample circuit is adapted for sampling a voltage signal from a main output, and outputting an error signal via said

main isolation circuit, said remote control circuit is adapted for send said isolated remote control signal to said main control circuit, if said remote control signal is off, said main power supply prohibitive circuit will force said main driven circuit output a low electrical level thus turning off said main power tube, otherwise, said main pulse adjustable circuit is capable of generating a main pulse and said main driven circuit is capable of normally performing;

or a remote control signal, in response to a main error signal, being send to said main control circuit for controlling said main power supply on/off, if said remote control signal is off, said remote control circuit force said main error signal being less than a threshold value, when said remote control signal is on, said remote control circuit is neutralized, said main sample circuit sample a voltage signal from said main output and send said sampled voltage signal to said main error amplifier to generate an optically coupled current, which is in turn output said main error signal via said main isolation circuit, wherein said main error signal is monitored by said main power supply prohibitive circuit, if said main error signal is less than said threshold value, said remote control signal is assumed to be off, so that said main power supply prohibitive circuit will force said main driven circuit output a low electrical level, otherwise, said main pulse adjustable circuit is capable of generating a main pulse in response to said main error signal and said main driven circuit is capable of normally performing.

2. The green switch power supply IC, as recited in claim 1, further integrating said standby control circuit, said main control circuit and said supplemental circuit, wherein said standby control circuit further comprises a standby pulse adjustable circuit and a standby driven circuit, said standby pulse adjustable circuit is adapted for generating a standby pulse in response to a standby error signal, and said main control circuit comprises said main pulse adjustable circuit, said main driven circuit and said main power supply prohibitive circuit;

wherein said remote control signal being send to said main power supply prohibitive circuit, if said remote control signal is off, said main power supply prohibitive circuit will force said main driven circuit output said low electrical level thus turning off said main power tube, otherwise, said main pulse adjustable circuit is capable of generating a main pulse and said main driven circuit is capable of normally performing;

or said remote control signal, in response to said main error signal, being send to said main control circuit and said main power supply prohibitive circuit for controlling said main power supply on/off, if said main error signal being less than said threshold value, said remote control signal is assumed to be off, said main power supply prohibitive circuit will force said main driven circuit output said low electrical level thus turning off said main power tube, otherwise, said main pulse adjustable circuit is capable of generating a main pulse and said main driven circuit is capable of normally performing;

wherein said supplemental circuit comprises a reference voltage source, an initiating circuit, and an offset circuit.

3. The green switch power supply IC, as recited in claim 2, wherein said standby pulse adjustable circuit and said main pulse adjustable circuit are of PWM circuit, same working frequency and same oscillator.

4. The green switch power supply IC, as recited in claim 2, further comprising a PFC error amplifier and a PFC control circuit, said PFC control circuit comprises a PFC pulse adjustable circuit and a PFC driven circuit.

5. The green switch power supply thick film circuit, as recited in claim 1, comprising said standby control circuit, said main control circuit, wherein said main control circuit comprises said main pulse adjustable circuit, said main driven circuit and said main power supply prohibitive circuit;

wherein said remote control signal being send to said main power supply prohibitive circuit, if said remote control signal is off, said main power supply prohibitive circuit will force said main driven circuit output said low electrical level thus turning off said main power tube, otherwise, said main pulse adjustable circuit, in response to said main error signal, is capable of generating a main pulse and said main driven circuit is capable of normally performing;

or said remote control signal, in response to said main error signal, being send to said main control circuit and said main power supply prohibitive circuit for controlling said main power supply on/off, if said main error signal being less than said threshold value, said remote control signal is assumed to be off, said main power supply prohibitive circuit will force said main driven circuit output said low electrical level thus turning off

said main power tube, otherwise, said main pulse adjustable circuit is capable of generating a main pulse and said main driven circuit is capable of normally performing;

6. The green switch power supply modular circuit, as recited in claim 1, comprising said standby control circuit, said standby feedback circuit, said main control circuit, and said main feedback circuit, wherein said main feedback circuit comprises said main sample circuit, said main error amplifier, said main isolation circuit and said remote control circuit; said main control circuit comprises a main pulse adjustable circuit, a main drive circuit, and a main power supply prohibitive circuit;

wherein said isolated remote control signal being send to said main control circuit for controlling said main power supply on/off, said main sample circuit of said main feedback circuit is adapted for sampling said voltage signal from said main output, and send said sampled voltage signal to said main error amplifier and finally outputting said main error signal via said main isolation circuit, if said remote control signal is off, said main power supply prohibitive circuit will force said main driven circuit output said low electrical level thus turning off said main power tube, otherwise, said main pulse adjustable circuit, in response to said main error signal, is capable of generating a main pulse and said main driven circuit is capable of normally performing;

or said remote control signal, in response to said main error signal, being send to said main control circuit for controlling said main power supply on/off, if said remote control signal of said main feedback circuit is off, said remote control circuit forces said main error signal being less than said threshold value, when said remote control signal is on, said remote control circuit is neutralized, said main sample circuit samples a voltage signal from said main output and send said sampled voltage signal to said main error amplifier to generate said optically coupled current, which is in turn output said main error signal via said main isolation circuit, wherein said main error signal is monitored by said main power supply prohibitive circuit of said main control circuit, if said main error signal is less than said threshold value, said remote control signal is assumed to be off, so that said main power supply prohibitive circuit will force said main driven circuit output said low electrical level, otherwise, said main pulse adjustable circuit is capable of generating a main pulse in response to said main error signal and said main driven circuit is capable of normally performing.

7. A green switch power supply with standby function, comprising a standby power supply, a main power supply, and a supplemental circuit, wherein said main power supply comprises a main converter circuit, a main feedback circuit, and a main control circuit, said main control circuit and a DC input terminal being with a common ground, wherein a remote control signal, in response to a main error signal, being send to said main control circuit for controlling said main power supply on/off, said standby power supply is adapted for providing a working power to said main power supply;

wherein said main feedback circuit comprises a main sample circuit, a main error amplifier, a main isolation circuit, and a remote control circuit, if said remote control signal is off, said remote control circuit force said an main error signal being less than a threshold value, when said remote control signal is on, said remote control circuit is neutralized, said main sample circuit samples a voltage signal from a main output and send said sampled voltage signal to said main error amplifier to generate an optically coupled current, which is in turn output said main error signal via said main isolation circuit;

wherein said main control circuit comprises a main pulse adjustable circuit, a main driven circuit, and a main power supply prohibitive circuit, wherein said main error signal is monitored by said main power supply prohibitive circuit, if said main error signal is less than said threshold value, said remote control signal is assumed to be off, so that said main power supply prohibitive circuit will force said main driven circuit output said low electrical level, otherwise, said main pulse adjustable circuit is capable of generating a main pulse in response to said main error signal and said main driven is capable of normally performing.

8. A green switch power supply with standby function, comprising a standby power supply, a main power supply, and a supplemental circuit, wherein said main power supply comprises a main converter circuit, a main feedback circuit, and a main control circuit, said main control circuit and a DC terminal of said main power supply being with a common ground;

wherein a remote control signal, in response to a main error signal, is send to said main control circuit for controlling said main power supply on/off, said main feedback circuit comprises a main sample circuit, a main error amplifier, a main isolation circuit, a remote control circuit wherein if said remote control signal is off, said remote

control circuit will force said main error signal being less than a threshold value, if said remote control is on, said remote control is neutralized, said main sample circuit will sample a voltage signal from a main output, and send said sampled voltage signal to said main error amplifier to generate an optically coupled current, which is in turn output said main error signal via said main isolation circuit, wherein said main control circuit comprises a main pulse adjustable circuit, a main drive circuit and a main power supply prohibitive circuit, said main error signal is monitored by said main power supply prohibitive circuit of said main control circuit, if said main error signal is less than said threshold value, said remote control signal is assumed to be off, so that said main power supply prohibitive circuit will force said main driven circuit output said low electrical level, otherwise, said main pulse adjustable circuit is capable of generating a main pulse in response to said main error signal and said main driven circuit is capable of normally performing.

9. A green switch power supply with standby function, as recited in claim 8, wherein if said voltage signal of said main output is larger than a predetermined value, said optically coupled current of said main feedback circuit is current free and said main error signal is minimized, otherwise a larger said voltage signal of said main output will form a corresponding larger said optically coupled current as well as a larger said main error signal, wherein said main error signal of said main control circuit is pull down by resistance or a constant current source.

10. A single ended switch power supply converter circuit, comprising at least a single ended forward output, and at least a single ended flyback output, wherein said single ended forward output is capable of sharing a same path with said single ended flyback output.

11. A PC ATX standard green PC switch power supply, comprising a green power supply as recited in claim 1, claim 8, and claim 9, wherein said standby converter circuit is a single ended converter circuit and said main converter circuit is selected from a group consisting a single ended hybrid converter circuit and single ended forward converter circuit.

12. A method for preventing current overloading and saturation of a switch power supply, comprising:

1) checking whether a primary current of an transformer, a current of an induction and a current of a power tube being excess an upper limit current; and

2) generating an adjusting signal so as to directly or indirectly adjust an error signal if the upper limit current is excess the upper limit, so that during subsequent adjustable periods, a duty cycle is reduced.

13. A switch power supply utilizing the method as recited in claim 12, comprising a converter circuit, a feedback circuit, a control circuit and a supplemental circuit, wherein a protective circuit of said supplemental circuit comprises a serial of transformer primary or power tube current sample circuit, a serial of transformer primary or inductance or power tube upper limit current detecting circuit, and a regulating circuit adapted for directly and indirectly regulating an error signal according an outputted signal from said detecting circuit.

14. A switch power supply IC utilizing the method as recited in claim 12, integrating a control circuit and a protective circuit, wherein said protective circuit comprises a serial of transformer primary or power tube current sample circuit, a serial of transformer primary or inductance or power tube upper limit current detecting circuit, and a regulating circuit adapted for directly and indirectly regulating an error signal according an outputted signal from said detecting circuit.

15. The switch power supply IC, as recited in claim 14, wherein said control circuit further comprises a PWM circuit, an oscillator, and a drive circuit, said PWM circuit is adapted for outputting a pulse to said drive circuit which has two outputs, one of which is adapted for driving a base of a power triode and another of which is adapted for driving an emitter of said power triode.

16. A digital processing high quality PFC, comprising a step for adjusting a PFC reference signal at predetermined ending point of a cycle, wherein said cycle is integer multiple of a commercial power, and each of said ending point of said cycle is synchronized with an edge of the commercial power half cycle;

or said cycle is much larger than said half cycle of said commercial power; and

or said cycle is not synchronized with said edge of said commercial power half cycle nor much larger than said commercial power half cycle, wherein a single time adjusting capacity is small so as to satisfy IEC1000-3-2 and IEC1000-3-4 standard.

17. A PFC device utilizing the method as recited in claim 16, further comprising a converter circuit, a reference circuit, a control circuit and a supplemental circuit, wherein said reference circuit comprises a series of voltage signal sample circuit of an output circuit, a voltage signal detection or module converter (A/D) circuit, a reference logic circuit and a reference output circuit, wherein said reference signal is send to said control circuit to generate a pulse.

18. A PFC IC utilizing the method as recited in claim 16, further integrating a portion of a reference circuit, wherein said reference circuit comprises a series of voltage signal sample circuit of an output circuit, a voltage signal detection or module converter (A/D) circuit, a reference logic circuit and a reference output circuit, wherein said reference signal is send to said control circuit to generate a pulse.

19. The PFC IC, as recited in claim 18, further comprising a control circuit of a pulse adjustable circuit comprising a ratio current circuit, a timing circuit, a pulse width adjustable logic circuit, a current amplifier and an oscillator wherein a PFC reference signal is applied as an output of said ratio current circuit, a pair of digital signal of said timing circuit are send to said pulse width adjustable logic circuit which in turn is adapted for outputting a pair of digital signal to said timing circuit, an output signal of the current amplifier is send to said timing circuit, said output signal from the oscillator is send to said pulse width adjustable logic circuit, finally said pulse width adjustable logic circuit will output a pulse signal.